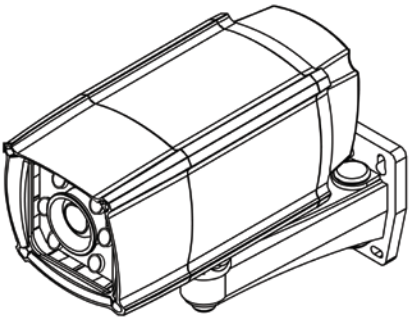
TV8IB6-8VF650LP

HD TVI 1080P ICR OSD License Plate Bullet Camera



USER MANUAL

FEATURES

- HD TVI - 1920 x 1080 @ 30fps
- 1/2.8" Sony CMOS, 1.3 Megapixel
- 6.0~50mm Auto Iris Lens
- 6 High Power IR LED; IR distance 250ft / 80m
- 0.02 Lux (F1.2 , AGC ON) / 0 Lux IR on
- Dual Power 12V DC / 24V AC
  12V DC: 8.64W / 720mA
  24V AC: 7W / 490mA
- IP67 Rating

⚠ ***Please read <u>Manual</u> before attempting to use this product.***

Specifications and appearance are subject to change without notice.

RoHS FC CE

TVI-23

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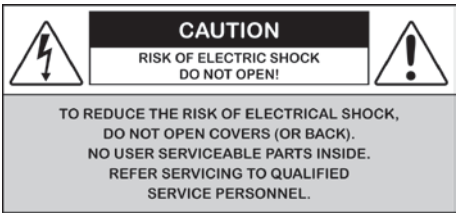

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN!
TO REDUCE THE RISK OF ELECTRICAL SHOCK,
DO NOT OPEN COVERS (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems.)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CAUTION

1. Never point the camera toward the sun
Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

2. Handle this camera with care
Avoid any shock or bumping of the camera. Improper handling could damage the camera.

3. Requires a proper operating environment
This camera is designed for indoor or outdoor use. The allowable temperature range for operation of this camera is between 14°F ~ 122°F / -10°C ~ 50°C.

4. Clean the front face or lens
It is recommended that the surface be cleaned every 3~6 months. Cleaning should be done by using a chamois, a very fine soft cloth, lens tissue, or cotton tipped applicator and ethanol to carefully remove any fingerprint or dust.

5. Check the power source voltage
The power source voltage should be within the specified range. (Camera must meet the specifications). Camera must be connected to a surge protector at all times.

6. Objects and liquid entry
Never push objects of any kind into this camera as this may touch dangerous voltage points of short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the video product.

7. Servicing
Do not attempt to service this video product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

8. Damage requiring service
Unplug this video product from the wall outlet and refer service to qualified servicing personnel under the following conditions:

a. When the power supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the video product.
c. If the video product has been exposed to rain or water.
d. If the video product has been dropped or the cabinet has been damaged.
e. When the video product exhibits a distinct change in performance.

LIMITED WARRANTY

OKINA USA products are covered under warranty for one (1) year from the date of purchase. The warranty will automatically be voided if any of the following occurs:

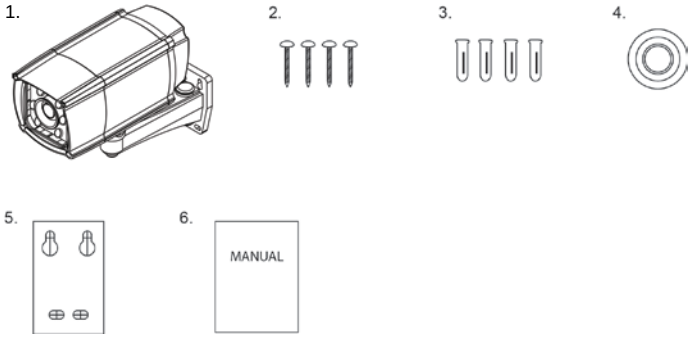
1. Camera sticker is removed
If the camera sticker is removed, we will not be able to confirm any information regarding when and where the product was purchased. We have no other way to verify the purchase record without the serial number on the camera sticker; therefore, it should not be removed.

2. Camera is modified in any way
If the camera is scratched, damaged, or modified in a manner not described in this manual, the warranty will be voided immediately. It is the customer's responsibility to keep the camera in good condition.

3. Video or power cable is cut
The video cable and the power cable should not be tampered with. Cutting or modifying of the cables will result in termination of the warranty.

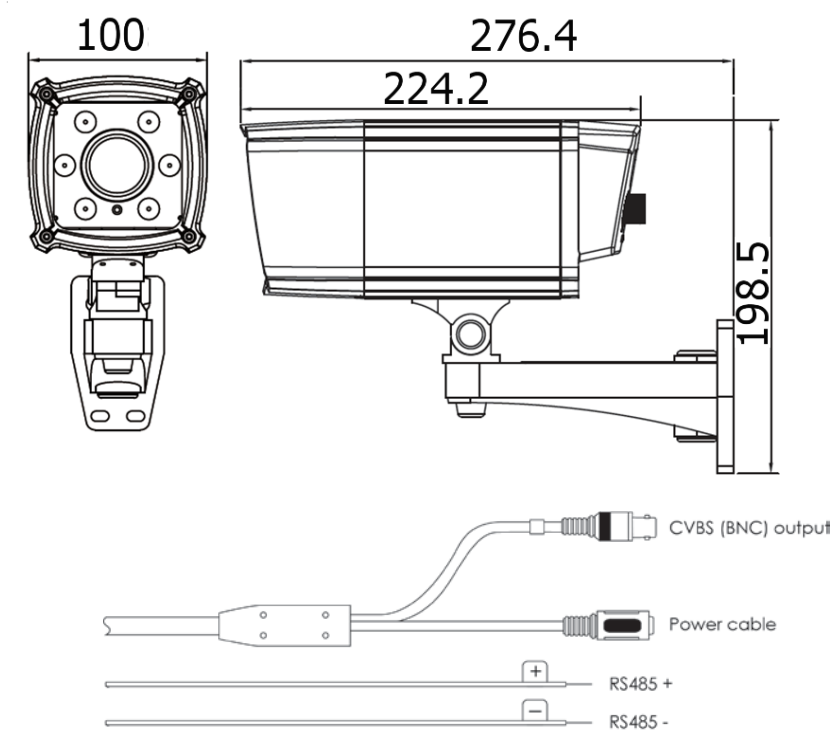
PACKAGE CONTENTS

1. One (1) HD TVI IR License Plate Bullet Camera
2. Four (4) Wall Mounting Screws
3. Four (4) Wall Anchors
4. One (1) Rubber Washer
5. One (1) Sticker Mounting Template
6. One (1) User Manual



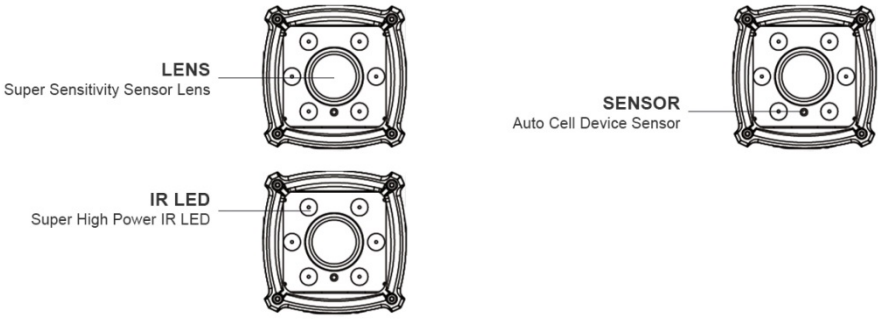
* For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

DIMENSIONS (Unit: mm)



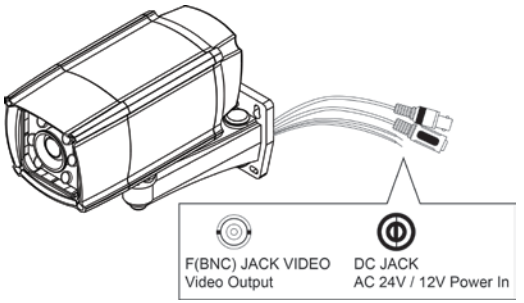
FUNCTIONS

The camera includes auto white balance mode (AWB) auto capture and color temperature.
The range is 2400°K~9600°K.
SENSOR：Auto Cell Device Sensor, the IR LED would on when night comes to make up lightness. IR LED would not on in the day, to reduce power consumption.



VIDEO, POWER AND DATA OUTPUT JACK

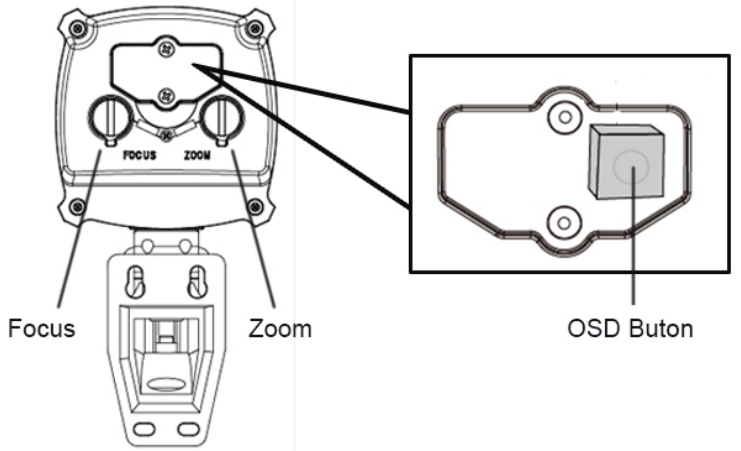
F(BNC) JACK is for video output. DC JACK is for the power in, it is necessary to use a constant voltage adapter. Data (RS485) to connect to controller for OSD setting.



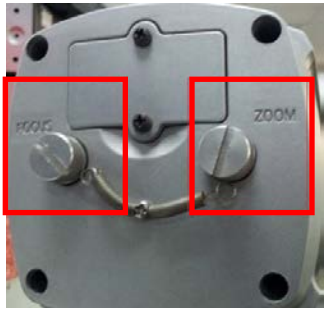
1. Please use suitable adapter DC12V ± 10 %, 1.5A. Otherwise, this product will be damaged
2. Please use AC24V ± 10%. Otherwise, this product will be damaged

LENS AND OSD ADJUSTMENT DIP FUNCTIONS

Unscrew the back of the device, the DIP switches can be seen under the cover. The DIP switches are adjustable and waterproof. The details of the functions are shown below.



Remove the focus/zoom knob cover to access adjustment knobs.



OSD

MAIN MENU	
1. LENS	DC
2. EXPOSURE	↲
3. BACKLIGHT	OFF
4. WHITE BAL	ATW
5. DAY&NIGHT	COLOR
6. NR	↲
7. SPECIAL	↲
8. ADJUST	↲
9. RESET	↲
10. EXIT	↲

1. LENS

LENS	DC	Default
	MANUAL	N/A

Fixed or Vari-Focal lens can be installed on this camera.
Manual – Iris is adjusted manually
DC – Iris is adjusted automatically by the camera according to light conditions.

NOTE: It is recommended that a high quality megapixel lens be used in order to get the best results in terms of picture quality.

2. EXPOSURE

EXPOSURE	
SHUTTER	AUTO
AGC	|||▮||||||| 11
SENS-UP	AUTO
BRIGHTNESS	||||||▮|||| 36
D-WDR	OFF
DEFOG	OFF
RETURN	RET

EXPOSURE			
SHUTTER	AUTO,1/60,FLK,1/240,1/480,1/1000,1/2000,1/5000,1/10000, 1/50000,X2,X4,X6,X8,X10,X15,X20,X25,X30 (AUTO)		
AGC	0~15 (11)		
SENS-UP	AUTO (Default)	SENS-UP	X2,X4,X6,X8,X10,X15,X20,X25,X30 (X2)
		RETURN	RET / END
	OFF		
BRIGHTNESS	0~100 (36)		

D-WDR	OFF / ON (OFF)		
DEFOG	OFF (Default)		
	ON	POS / SIZE	SIZE,RET,AGAIN
		GRADATION	OFF / LOW / MIDDLE / HIGH (LOW)
		DEFAULT	
		RETURN	RET / END
RETURN	RET / END		

SHUTTER
AES (auto electronic shutter) - the camera automatically sets the optimum shutter speed.
FL - flicker less mode avoids interference from light sources (recommended for video-iris or DC-iris lenses only).
FIXED - forces a fixed shutter speed.

※ Shutter speed corresponding with car speed

Shutter speed	Car speed	Camera to Object Distance
1/60~1/120	10 ~20km	30~40m
1/150~1/300	30~60km	15-20m
1/310~1/500	60~80km	5-10m

NOTE: The table above is only for reference.

AGC
Regulate the gain or amplification of the video signal, mainly used in low-light conditions with the iris fully open.
Can be used only when DAY&NIGHT is not set to AUTO.

SENSE UP
Allow user selectable digital show shutter speed in order to allow extra light into a camera thereby providing higher sensitivity in low light conditions.

ACCE (D-WDR)
Stands for Adaptive Contrast and Color Enhancement which is equivalent to dynamic range reduction technique.
The contrast ratio of the image can be effectively expressed and the edge information can be improved in order to enhance the overall visibility of the image.

DEFOG
Improves the clarity of images taken in poor conditions such as fog, smoke, rain or snow. Applied to live or recorded color video, it provides real time results and displays visual details that would normally have been difficult to distinguish.

3. BACKLIGHT

BACKLIGHT	OFF (default)				
	WDR	GAIN	MIDDLE, HIGH, LOW (LOW)		
		WDR OFFSET	0~60 (0)		
		RETURN	RET / END		
	BLC	GAIN	MIDDLE, HIGH, LOW, (MIDDLE)		
		AREA	POSITION	SIZE,RET,AGAIN	
		DEFAULT			
		RETRUN	RET / END		
	HBLC	SELECT	AREA1, AREA2, AREA3, AREA4		
		DISPLAY	ON (Default)	POSITION	SIZE,RET,AGAIN
			OFF		
		LEVEL	0~100 (20)		
		MODE	ALL DAY, NIGHT (ALL DAY)		
		BLACK MASK	ON, OFF (ON)		
		DEFAULT			
		RETURN	RET / END		

4. WHITE BAL

WHITE BAL		
ATW (Default)		
AWC --> SET		
INDOOR		
OUTDOOR		
MANUAL	BLUE	0~100 (47)
	RED	0~100 (44)
	RETURN	RET / END
AWB		

5. DAY&NIGHT

DAY&NIGHT					
EXT (Default)					
AUTO	DELAY	0~60 (5)			
	D-N (AGC)	0~100 (60)			
	N-D (AGC)	0~100 (30)			
	RETURN	RET / END			
COLOR					
B/W	BURST	ON,OFF (OFF)			
	IR SMART	OFF (OFF)			
		ON	LEVEL	0~15 (5)	
			AREA	POSITION	SIZE,RET,AGAIN
			RETURN		RET / END
	IR LED	ON, OFF (ON)			
	IR PWM	0~100 (0)			
	RETURN	RET / END			
RETURN	RET / END				

6. NR

NR				
2DNR	OFF, ON (ON)			
3DNR	OFF			
	ON (ON)	SMART NR	OFF (OFF)	
		ON	SENSITIVITY	0~100 (50)
			RETURN	RET / END
		LEVEL	0!100 (85)	
		START AGC	0~100 (0)	
		END AGC	0~100 (0)	
		RETURN	RET / END	
RETURN	RET / END			

SMART NR
Avoid over exposure problem when he camera is focused on a wall area.

7. SPECIAL

SPECIAL				
CAM TITLE	OFF (default)			
	ON	0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z △ →←↑↓ ( ) — __ □ / = & : ~ , . ← → CLR POS END		
D-EFFECT	FREEZE	OFF, ON (OFF)		
	MIRROR	OFF, MIRROR, V-FLIP, ROTATE (OFF)		
	D-ZOOM	OFF (default)		
		ON	D-ZOOM	x1.0, x1.1, x1.2, x1.3, x1.4, x1.5, x1.6, x1.7, x1.8, x1.9, x2.0, x2.1, x2.2, x2.3, x2.4, x2.5, x2.6, x2.7, x2.8, x2.9, x3.0, x3.1, x3.2, x3.3, x3.4, x3.5, x3.6, x3.7, x3.8, x3.9,

				x4.0 ~ x62.0 (x2.0)	
			PAN & TILT	D-ZOOM ←, ↑, →, ↓	
			DEFAULT		
			RETURN	RET / END	
	SMART D-ZOOM	OFF (default)			
		ON	SELECT	AREA1, AREA2	
			DISPLAY	ON (default)	POSITION ←, ↑, →, ↓
				OFF	
			SENSITIVITY	0~60 (30)	
			D-ZOOM	x1.0, x1.1, x1.2, x1.3, x1.4, x1.5, x1.6, x1.7, x1.8, x1.9, x2.0, x2.1, x2.2, x2.3, x2.4, x2.5, x2.6, x2.7, x2.8, x2.9, x3.0, x3.1, x3.2, x3.3, x3.4, x3.5, x3.6, x3.7, x3.8, x3.9, x4.0 ~ x62.0 (x2.0)	
			TIME	0~15 (3)	
			DEFAULT		
			RETURN	RET / END	
	NEG. IMAGE	OFF, ON (OFF)			
	DIS	OFF, ON (OFF)			
	RETURN	RET / END			
MOTION	OFF (Default)				
	ON	SELECT	AREA1, AREA2, AREA3, AREA4		
		DISPLAY	OFF		
			ON (default)	POSITION	SIZE,RET,AGAIN
		SENSITIVITY	0~60 (30)		
		MOTION VIEW	OFF, ON (ON)		
		DEFAULT			
		RETURN	RET / END		
PRIVACY	OFF (default)				
	ON	SELECT	AREA1~AREA8		
		DISPLAY	COLOR (default)	POSITION	TOP, LEFT, TOP RIGHT, BOTTOM LEFT, BOTTOM RIGHT, RET, AGAIN
			INV.		
			MOASTIC		
			OFF		
		COLOR	0~15 (2)		
		TRANS	0~3 (3)		
		DEFAULT			
		RETURN	RET / END		
LANGUAGE	ENG / JPN / CHN1/ CHN2 / KOR / GER / FRA / ITA / SPA / POL / RUS / POR / NED / TUR / HEB / ARB				
DEFECT	LIVE DPC	OFF			
		ON	LEVEL	0~100 (21)	
			RETURN	RET / END	
		AUTO (default)			
	STATIC DPC	OFF			
		ON (default)	START		
			LEVEL	0~60 (5)	
			SENS-UP	X2, X4, X6, X8, X10, X15, X20, X25, X30 (x8)	
			AGC	0~8 (0)	
			RETURN	RET / END	
RS485	CAM ID	0~255 (1)			
	ID DISPLAY	OFF (OFF)			
		ON	CAM 001~CAM 255		
	BAUD RATE	2400,4800,9600,19200,38400 (9600)			
	RETURN	RET / END			
VERSION	140930				
RETURN	RET	RET / END			

8. ADJUST

ADJUST			
SHARPNESS	SHARPNESS	0~15 (10)	
MONITOR	LCD (default)	GAMMA	USER+Y,0.45,0.50,0.55,0.60,0.65,0.70 ,0.75,0.80,0.85.0.90,0.95,1.00,AUTO, USER (USER+Y)
		ADAPT LEVEL	0~100 (50)
		BLUE GAIN	0~100 (55)
		RED GAIN	0~100 (55)
		RETURN	RET / END
	CRT	BALCK LEVEL	-30~0~+30 (+0)
		BLUE GAIN	-50~0~+50 (+0)
		RED GAIN	-50~0~+50 (+0)
		RETURN	RET / END
LSC	ON,OFF (OFF)		
NTSC / PAL	NTSC, PAL		
RETURN	RET / END		

9. RESET

RESET	
FACTORY	RESET / CHANGE
RETURN	RET / END

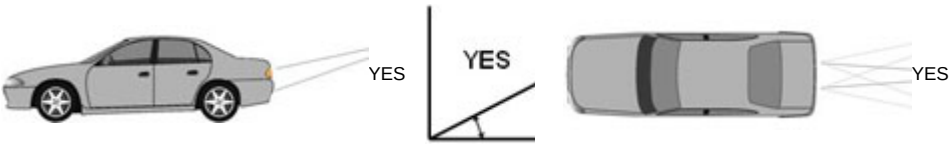
10. EXIT

RULES TO DESIGN LICENSE PLATE CAMERA

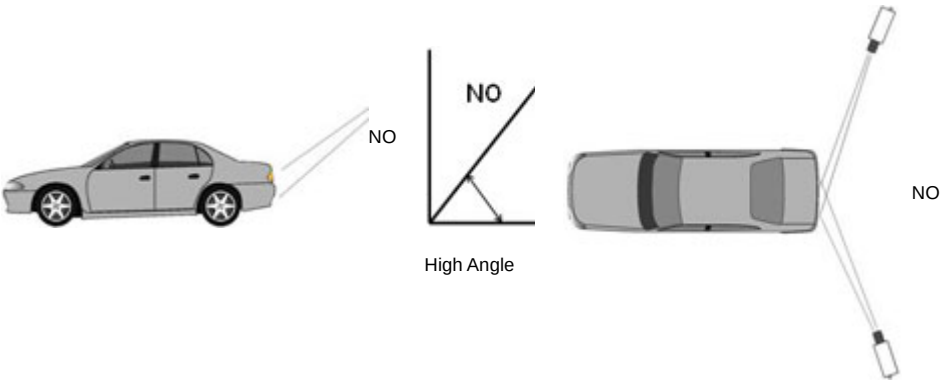
1. Location and Trajectory

Please note the following diagram:

In order to obtain the most optimal image, place the camera where it can obtain a clear, straight view of the license plate. A low angle is recommended to get the clearest license plate images.



Low Angle



High Angle

2. Focusing and Shutter Speed
Focusing is the most important thing. It is recommended that the focusing should be done on the license plate of a parked vehicle. It will take time to focus. An example of shutter speed is shown below:

Before

After

※ Shutter speed corresponding with car speed

Shutter Speed	Car Speed	Camera to Object Distance
1/60 ~ 1/120	6~12mph / 10~20km	100~130ft / 30~40m
1/150 ~ 1/300	18~37mph / 30~60km	50~65ft / 15~20m
1/310 ~ 1/500	37~50mph / 60~80km	15~30ft / 5~10m

** The table above is only for reference.*

Shutter speeds of 1/250 and 1/500 are the recommended settings.
Please use the chart in the installation manual when selecting shutter speed.

3. High Resolution and FPS Setting for DVR
The quality of the DVR used is also an important factor for this application.
A high-resolution DVR capable of recording at 20 to 30 FPS per channel is the minimum requirement for recording of SIR36-870VF650LP images. To have optimal recorded playback performance, a 30 FPS DVR is suggested.

RECOMMENDED CAMERA KEYBOARD CONTROLLER

PTZ-KB050

PTZ-KB050X

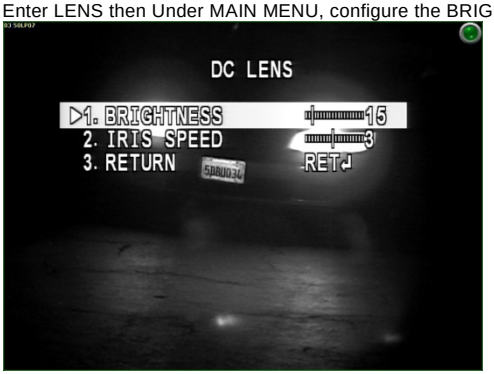
PTZ-KB250X

For night time OSD settings, it is better to use a keyboard controller. Please refer to keyboard controller's user manual for how to pull out the OSD menu from camera.

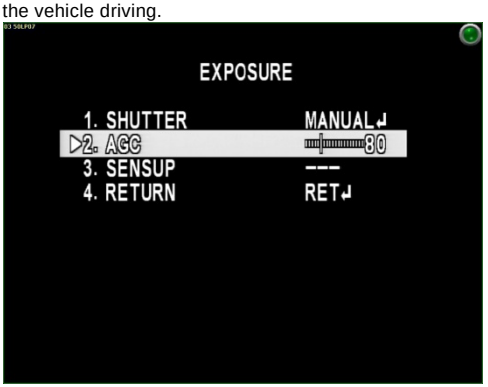
Quick setup for License Plate Capture (below OSD setting must be done at night).

After mounted the camera and focused with parked vehicle (Headlight On), Please enter to OSD Setting.

Enter LENS then Under MAIN MENU, configure the BRIGHTNESS value until you can see the License Plate.



After BRIGHTNESS configuration please have vehicle drive by to see Front and Rear License Plate, it may have an little blurring when vehicle is moving, please adjust Automatic gain control (AGC) value when during the vehicle driving.



Go back to Main Menu to Save the setting you was make by under selection of “9 EXIT” before you exit the OSD setup.

SPECIFICATIONS

Model	TV8IB6-8VF650LP
Image Sensor	1/2.8" Sony CMOS : 1.3 Megapixel
Resolution	1920(H) x 1080(V) @ 25/30 FPS
Synchronizing System	Internal
Scanning System	2:1 Interlace
Video Output	HD TVI
Electronic Shutter	Auto 1/60 (1/50) ~ 1/50,000 sec / Flk
Minimum Illumination	0.02Lux (F1.2 , AGC ON)
IR LED	6 High Power IR LED
IR Distance	Up to 250ft / 80m
Lens	6.0~50mm Vari-Focal Lens
Coaxial Cable Transmission Distance	1000ft / 300m (3C) ; 1600ft / 500m (5C)
Twisted Cable Transmission Distance	300ft / 100m ; 65ft / 200m (TVI Balun) (Cat5e standard)
Mechanical IR Cut	Yes
Power Source	Dual Power 12V DC / 24V AC
Power Consumption	12V DC: 8.64W / 720mA 24V AC: 7W / 490mA
IP Rating	IP67
Operating Temperature	14°F ~ 122°F / -10°C ~ 50°C
Storage Temperature	-4°F ~ 158°F / -20°C ~ 70°C
Dimension w/ Sunshield	3.48(W) x 7.81(H) x 10.29L) inches / 88.5(W) x 198.5(H) x 261.4(L) mm
Net Weight	3.31 lbs / 1.5 kg

**Specifications are subject to change without notice.*

PAL Version also available.

www.OKINAUSA.com

RoHS FC CE

MADE IN TAIWAN

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